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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,823	12/28/2001	Shinichi Hoshino	500.41052X00	5554

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EXAMINER
FERNANDES, CHERYL M

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/028,823	HOSHINO ET AL.
	Examiner	Art Unit	
	Cheryl M. Fernandes	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 February 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is

closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 December 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage

        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to Amendment filed December 28, 2004.

Claims 1-10 are pending. Claims 1-6 and 9 are amended.

Response to Arguments

Applicant's arguments filed December 28, 2004 have been fully considered but

they are not persuasive.

2.   Referring to the 35 USC 112 first paragraph rejections toward claims 3, 5, 6, 7, 8,

and 9, Applicant has amended claims 3, 5, 6, 8, and 9 to overcome the rejections.

Therefore, the rejections toward claims 3, 5, 6, 8, and 9 have been withdrawn. However,

the rejection toward claim 7 has been maintained.

3.   Referring to the 35 USC 112 second paragraph rejections toward claims 1-10,

Applicant has not amended the claims to overcome *all* the deficiencies noted in the prior

office action. As a result, the 35 USC 112 second paragraph rejections toward claims 2,

3, 6, 7, and 10 are maintained. In addition, Applicant's amendments raise new 35 USC

112 second paragraph issues in claims 5, 6, and 9.

4.   Referring to claims 1-10, Applicant argues that Jacobs does not teach or suggest

reserving a resource at execution of a query from the stored program of the interpreted

language and keeping relational information between the reserved resource and

resources already reserved in the query processing in execution having invoked the

program; and releasing, at release of a transaction from the stored program, associated

ones of resources according to the relational information kept in said reserving step.

However, Examiner respectfully disagrees. Jacobs does teach the aforenoted claimed

subject matter.

Examiner respectfully submits that Jacobs teaches reserving a cartridge

resource through a 'shutdown' routine at the execution of a browser request (col. 6,

lines 33-36; col. 7, lines 1-28; col. 9, lines 62-67), whereby the cartridge becomes

unavailable for subsequent requests after the routine is invoked, thereby reserving the

cartridge resource (col. 7, line 35 – col. 8, line 12). Jacobs also teaches that the

cartridge can be a JAVA runtime interpreter cartridge (col. 8, lines 15-33; Fig. 2,

elements 230, 234, and 238).

Examiner respectfully submits that Jacobs teaches keeping relational metadata

information between the reserved cartridge resources and cartridge resources already

reserved in the query processing in execution having invoked the program (Fig. 2,

element 258; col. 9, lines 20-57; Fig. 4).

Examiner respectfully submits that Jacobs teaches releasing cartridge instances

according to the relational metadata information kept in the reserving step (col. 12, line

65- col. 13, line 20; col. 13, lines 37-67; col. 10, lines 34-59).

5.   Referring to claims 1-10, in response to applicant's argument that the references

fail to show certain features of applicant's invention, it is noted that the features upon

which applicant relies (i.e., "the relational information manages the condition of

resources used in execution of a SQL program and a Java program invoked by the SQL

program", "resource table", "release resource table", "dynamic resource management

for securing resources in execution of program", and "dynamic information") are not

recited in the rejected claim(s). Although the claims are interpreted in light of the

specification, limitations from the specification are not read into the claims. See *In re*

Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the
> manner and process of making and using it, in such full, clear, concise, and exact
> terms as to enable any person skilled in the art to which it pertains, or with which
> it is most nearly connected, to make and use the same and shall set forth the
> best mode contemplated by the inventor of carrying out his invention.

6. Claim 7 is rejected under 35 U.S.C. 112, first paragraph, because the

specification, while being enabling for an 'External Program Execution Environment'

(see Fig. 1, element 101 and para. 23 of the instant specification), does not reasonably

provide enablement for a program of "a third person" wherein resources are set as

unavailable until a transaction is completed. The specification does not enable any

person skilled in the art to which it pertains, or with which it is most nearly connected, to

make or use the invention commensurate in scope with these claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.   Claims 2, 3, 5, 6, 7, 9, and 10 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

Claims 2 and 10 are rejected for the following reasons:

-   the claims recite "a stored program written in an interpreted language

    (JAVA)". It is unclear as to whether or not the scope of the claims should be

    limited to stored JAVA programs.

Referring to claim 3, the claim recites the analyzing of "a query request inputted

thereto". However, it is unclear as to where the query request is inputted.

Claim 6 is rejected for the following reasons:

-   the claim recites "a stored program written in an interpreted language

    (JAVA)". It is unclear as to whether or not the scope of the claim should be

    limited to stored JAVA programs; and

-   the claim recites the limitation "..a stored program written in a heterogeneous

    language to a database language or an interpreted language" in the preamble

    of the claim. However, it is unclear as to whether or not the heterogeneous

language corresponds to "a database language" or to "an interpreted language".

Referring to claims 5 and 9, the claims recite the limitation "..a stored program written in a heterogeneous language to a database language or an interpreted language" in the preamble of the claims. However, it is unclear as to whether or not the heterogeneous language corresponds to "a database language" or to "an interpreted language".

Referring to claim 7, the claim recites the analyzing of "a query request inputted thereto". However, it is unclear as to where the query request is inputted.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74

(Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86

USPQ 481 (Bd. App. 1949). In the present instance, claim 7 recites the broad recitation

"a stored program written in an interpreted language", and the claim also recites "a

JAVA program" which is the narrower statement of the range/limitation. It is therefore

unclear as to whether or not the stored program is a JAVA program or any interpreted

language program that is stored.

In the interest of compact prosecution, with regard to the above-mentioned claim,

Examiner will assume that interpreted language program used is a stored JAVA

program.

Claim 7 is also rejected for the following reasons:

- the claim is rejected under 35 U.S.C. 112, second paragraph, as being

  incomplete for omitting essential elements, such omission amounting to a gap

  between the elements. See MPEP § 2172.01. The omitted elements are: a

  first and second program. Examiner respectfully asserts that a claim reciting a

  third program requires a first and second program;

- the claim recites "the program" in paragraphs 3 and 4. It is unclear as to

  whether 'the program' is the JAVA program or the third program; and

- the claims recite "a third person" in paragraph 4. It is unclear as to what is

  meant by "a third person", especially since there is no previous mention of

  first or second persons in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or
described in a printed publication in this or a foreign country, before the invention
thereof by the applicant for a patent.

8.   Claims 1-10 are rejected under 35 U.S.C. 102(a) as being anticipated by US

Patent Number 6,225,995 B1 issued to Jacobs et al (hereafter Jacobs).

Referring to claims 1, 2, 5, 6, 9, and 10, Jacobs discloses:

Database management methods, apparatus, and programs (col. 4, lines 20-22;

col. 31, lines 39-43) for addressing to a commit request (summary, lines 43-46; 'browser

request', col. 6, lines 33-36; col. 27, line 63-col. 28, line 6, Fig. 7E) or a rollback request

in a stored program (code is stored in storage device (Fig. 1, element 110), col. 6, lines

14-23; 'software modules' or 'cartridges', col. 6, lines 33-36, col. 7, lines 35-65;

'exemplary cartridges', col. 8, lines 15-33; col. 20, lines 16-30) written in an interpreted

language ('JAVA runtime interpreter', col. 8, lines 15-33; Fig. 2, elements 230, 234, and

238), said method comprising the steps of:

- reserving a resource ('shutdown() routine'[1], col. 7, line 35 – col. 8, line 12) at

   execution of a query ('browser request', col. 6, lines 33-36; col. 7, lines 1-28;

   col. 9, lines 62-67) from the stored program (refer to mention of cartridge

above) of the interpreted language (refer to mention of JAVA interpreter

above) and keeping relational information between the reserved resource and

resources already reserved in the query processing in execution having

invoked the program ('metadata' stored (Fig. 2, element 258), col. 9, lines 24-

43; Fig. 4); and

- releasing, at release of a transaction from the stored program ('release of

   cartridge instances', col. 12, line 65- col. 13, line 20), associated ones of

   resources (col. 13, lines 37-47) according to the relational information kept in

   said reserving step (col. 13, lines 48-67; col. 10, lines 34-59)[2].

Referring to claims 3 and 7, Jacobs discloses:

A database management method and apparatus (col. 4, lines 20-22; col. 31,

lines 39-43) for addressing to a commit request (summary, lines 43-46; 'browser

request', col. 6, lines 33-36; col. 27, line 63-col. 28, line 6, Fig. 7E) or a rollback request

in a stored JAVA program ('JAVA runtime interpreter', col. 8, lines 15-33; code is stored

in storage device (Fig. 1, element 110), col. 6, lines 14-23; 'software modules' or

'cartridges', col. 6, lines 33-36, col. 7, lines 35-65; 'exemplary cartridges', col. 8, lines

15-33; col. 20, lines 16-30), said method comprising the steps of:

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[1] The shutdown() routine is performed on a cartridge after it has been created and executed as seen in the table in col. 7. Examiner asserts that by invoking this routine, the cartridge becomes unavailable for subsequent requests, thereby reserving the cartridge.

[2] Idle time is part of the relational information stored in the metadata of Fig. 2 (also see example of idle time of 30 seconds in col. 10, lines 37-47). Hence after the completion of a transaction, when the maximum idle time for each cartridge instance has passed, the cartridge is released in order to de-allocated to free resources.

- analyzing a query request inputted thereto ('browser request', col. 6, lines 33-

  36; col. 7, lines 1-15) and generating an execution module (creation of 'new

  cartridge instance', col. 7, lines 16-28; col. 7, line 35- col. 8, line 33[3];

  'Resource Manager', col. 10, lines 25-59[4]);

- checking, when the stored JAVA program which is not contained in the

  execution module (col. 9,line 60-col. 10, line 10[5]) and which is beforehand

  stored in a database management system (DBMS) ('metadata', col. 9, lines

  24-42[6]; 'DBMS', col. 31, lines 39-59) is invoked at execution of the execution

  module (refer to example of cartridge (C1) used in col. 10, lines25-45[7]),

  unknown resources to be used by the program (cartridge authentication, col.

  9, line 60-col.10, line 24) and determining resources to be set as resources

  unavailable to another program until a transaction is completed ('shutdown()

  routine', col. 7, line 49-col. 8, line 7; col. 11, line 50-col. 12, line 63; col. 30,

  line 58-col. 31, line 5 (Fig. 7I)) and resources to be set as unavailable

  resources until the program is terminated ('shutdown() routine', col. 7, line 49-

  col. 8, line 7; col. 11, line 50-col. 12, line 63; col. 12, line 65- col. 13, line 20,

  col. 13, lines 48-67); and

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[3] Refer to the cartridge routines that are executed within the Cartridge modules.
[4] The Resource Manger manages the execution of the Cartridge modules (see lines 27-33).
[5] After receiving a browser request, which includes a URL, the dispatcher sends the URL from the request to a virtual path manager that determines the cartridge, if any, associated with the URL. This is done by mapping the URLs to cartridges in metadata (Fig. 2, element 258).
[6] Cartridge information is stored for later access as metadata.
[7] Examiner respectfully asserts that Cartridge C1 is invoked by the virtual path manager through the browser requests made. The Resource Manager then determines, after receiving receipt of requests from the dispatchers, whether any existing instance of C1 is available.

- releasing, in response to an input of a transaction completion request (col. 12,

line 65- col. 13, line 20; col. 30, line 58-col. 31, line 5 (Fig. 71)[8]) or issuance of

a commit statement from the program, the resources set as unavailable

resources until the transaction is completed in the stored program ('release of

cartridge instances' in response to completed browser requests, col. 13, lines

37-67).

Referring to claims 4 and 8, Jacobs discloses releasing the resources set as

unavailable resources until the program is terminated ('release of cartridge instances'

when finished responding to browser requests[9], col. 12, line 65- col. 13, line 20; col. 13,

lines 37-67).

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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[8] At the notification of a completed transaction, control returns to intercepting another browser request.
[9] Cartridge instances are released in response to completed browser requests until the instances are terminated.

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl M Fernandes whose telephone number is (571) 272-4018. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 6, 2005
CMF

UYEN LE
PRIMARY EXAMINER